

Anterior Shoulder Instability

Anterior shoulder instability typically results from a dislocation injury to the shoulder joint when the humeral head (ball) of the humerus (upper arm bone) is displaced from its normal position in the center of the glenoid (socket) and the joint surfaces no longer touch each other. The most common dislocation is anterior (more than 90 percent), where the humeral head is in front and below the glenoid.

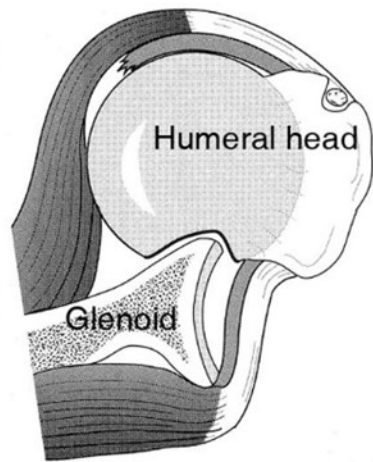


X-ray of anterior shoulder dislocation

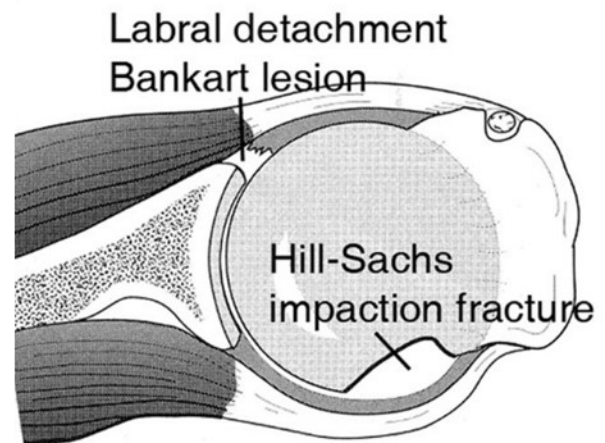
Because the shoulder has more motion than any other large joint in the body, it is the most commonly dislocated large joint. The shoulder is like a golf ball on a golf tee. Many structures contribute to shoulder stability and include bony contours of the humeral head (ball) and glenoid (socket), the soft-tissue bumper of the labrum which surrounds the rim of the socket, the capsule and ligaments that attach the humeral head to the labrum of the glenoid, and the muscles of the rotator cuff which surround the deep shoulder joint. When a shoulder is dislocated from its glenoid (socket), all these stabilizing structures may be injured to different degrees, including the humeral and glenoid bone, the labrum, the capsule and ligaments, and the rotator cuff muscles. When a younger active patient dislocates his or her shoulder, he or she may injure all these structures but typically tears the labrum off the glenoid (socket) along with the attached stabilizing capsule and ligaments, called a Bankart lesion.



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Anterior Dislocation



Dislocation reduced

Illustration on the left shows an anterior dislocation where the humeral head dislocates out the front. On the right, the dislocation has been reduced revealing a bankart lesion (tear) and Hill-Sachs impaction fracture (dent).

In this younger more active population, surgery is needed to repair the labrum with its ligaments and capsule otherwise, the shoulder typically remains unstable, continues to dislocate and results in further injury to the stabilizing structures. Therefore, early surgery is typically recommended to repair the torn labrum and capsular ligaments and restore shoulder stability.

In patients over forty years of age that sustain a shoulder dislocation, there is a lower risk for re-dislocation and conservative treatment is often an option. However, these older patients have a risk for tearing their rotator cuff with the dislocation which may also require surgery.

Overhead throwing and hitting athletes can stretch out anterior capsule and ligaments of the shoulder with repetitively putting their arm in the overhead late cocking position associated with throwing and overhead hitting. This usually causes micro-instability of the shoulder, not dislocations, which results in pain and limitations with overhead activities from subtle anterior movement of the humeral head (ball) in the glenoid (socket) and internal impingement (abnormal internal contact) between the humeral head (ball) and the glenoid (socket) and intervening rotator cuff and labral tissues. Longstanding internal impingement results in symptomatic labral tears and rotator cuff tears.



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Frequent Signs and Symptoms

- Severe pain in the shoulder at the time of dislocation injury
- Loss of shoulder function and severe pain when attempting to move the shoulder
- Apprehension, feeling like your shoulder wants to slip out of place with overhead positions
- Tenderness, deformity (fullness in the armpit and prominent roof of the shoulder), and swelling
- Pain with moving the shoulder, especially when reaching overhead; pain with heavy lifting; pain that awakens you at night
- Loss of strength
- Numbness or paralysis in the upper arm and deltoid muscle from pinching, stretching, or pressure on the blood vessels or nerves
- Crepitation (“crackling”) feeling and sound when the injured area is touched or with shoulder motion
- Decreased or absent pulse at the wrist because of blood vessel damage (rare).

Etiology (Causes)

- Direct blow to the shoulder
- Tackling or falling on an outstretched arm resulting backward force on an extended arm
- Repetitive throwing motion or swimming
- Result of a shoulder dislocation injury
- Congenital abnormality (you are born with it), such as a shallow or malformed joint surface
- Violent muscle contractions (seizures)

Risk Factors

- Contact sports (football, wrestling, and basketball)
- Sports that involve repetitive overhead activity, such as baseball, volleyball, swimming
- Sports that require forceful lifting, hitting, or twisting
- Previous shoulder dislocations or sprains
- Shoulder fracture
- Repeated shoulder injury
- Poor physical conditioning (strength and flexibility)



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Prevention

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Cardiovascular fitness
 - Shoulder strength
 - Flexibility and endurance
- For participation in contact sports, wear protective shoulder pads.

Outcomes

Following reduction of a shoulder dislocation, functional outcomes are excellent and re-dislocation rates are low with proper treatment. For younger active patients, re-dislocation rates without surgical repair are extremely high and therefore, young athletic patients require arthroscopic repair of the injured stabilizing structures, most of the torn labrum, capsule and ligaments. For patients older than age 40, re-dislocation rates are lower, but the rate of rotator cuff injury is higher. Most patients over forty can be treated successfully without surgery unless a rotator cuff tear exists which requires operative repair in most cases.

Potential Complications

- Damage to nearby nerves or major blood vessels, causing temporary or permanent weakness, paralysis, numbness, coldness, and paleness from dislocation
- Fracture or joint cartilage injury due to the dislocation or reduction of the dislocation
- Prolonged healing or recurrent dislocation if activity is resumed too soon
- Rotator cuff tear (usually if you are older than age 40 at time of first dislocation)
- Repeated shoulder dislocations, particularly if the previous dislocation is not repaired and appropriately rehabilitated; most recurrent dislocations are caused by repeat injury, but with increasing number of dislocations, less force is required to cause subsequent dislocations
- Unstable or arthritic shoulder following repeat injuries

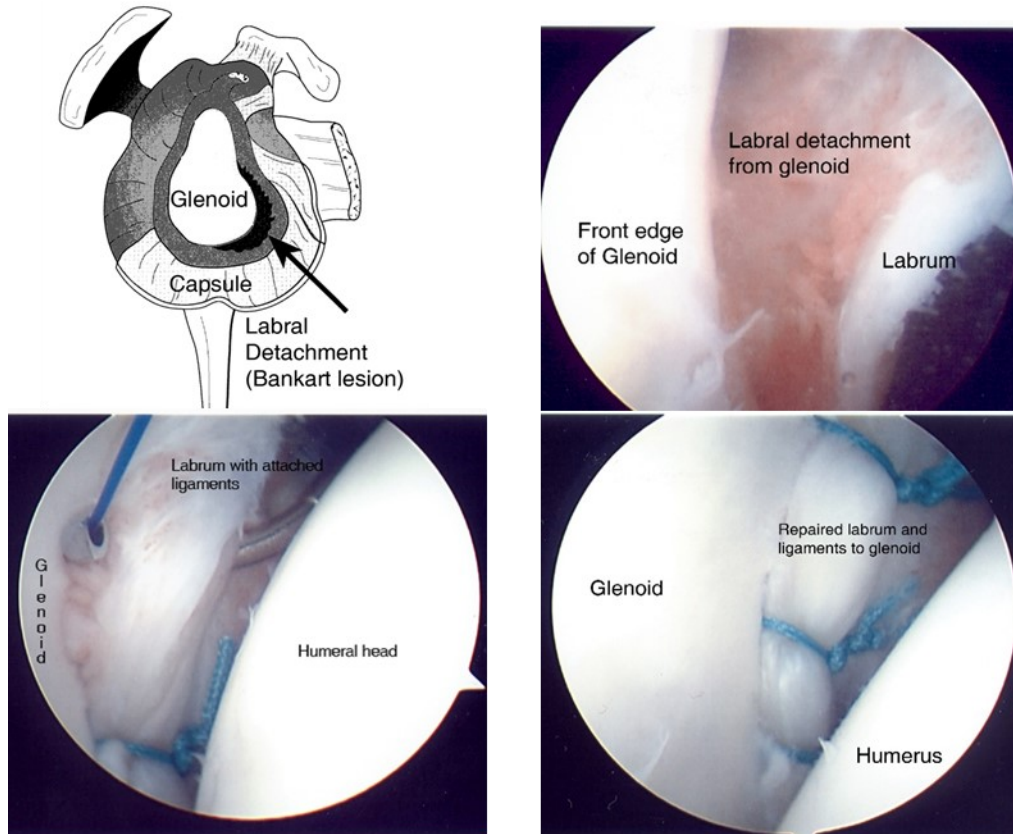
Treatment Considerations

Shoulder dislocations should be reduced (put back in place) as soon as possible for the comfort of the patient and release potentially damaging traction of nerves and blood vessels. It may also help to restore blood flow to the humeral head bone which may be obstructed with the dislocation. Following the reduction, slings should be discontinued and early range of motion and gentle strengthening should begin to restore shoulder function. X-ray, MRI studies and sometimes CT scans are needed to determine the full extent of injury to the stabilizing structures of the shoulder joint.



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Younger patients often require arthroscopic surgery to repair the torn labrum, capsule and ligamentous structures and even sometimes fractures of the bone and tears in the rotator cuff. Older patients often return to previous levels of function without surgery unless they sustain a fracture or tear of the rotator cuff that requires surgery.



The illustration at the top left shows a Bankart lesion or tear of the labrum and capsular ligaments away from the glenoid, socket of the shoulder joint. The top right arthroscopic image shows the glenoid tear from the labrum. The bottom arthroscopic photos show the torn labrum and ligaments being repaired (left) and the labrum and ligaments arthroscopically repaired back to the glenoid (right).



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Possible Medications

- General anesthesia or IV sedation may be used during the reduction of the dislocation
- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (DO NOT take within 10 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Strong pain relievers may be prescribed as necessary. Use only as directed and only as much as you need.

Modalities (Cold Therapy)

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.

Notify My Office If Symptoms Worsen



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